

Answer Guide

Under the Microscope

Grades 3-5

1. **Bacteria, Apples, and Cats are all alive.**

2. **Plants can live longer than animals.**

No, animals continue to develop even after birth.

Plants keep growing all the way up until they die.

3. **Answers will vary.** Drawing could include a cellular membrane around the outside of the cell, a **nucleus** which holds the DNA in the center of the cell, mitochondria which generates energy for the cell, the golgi apparatus which packages exports for the cell, and more.

DNA is folded into chromosomes which are stored inside of the **nucleus** of the cell.

4. All life **develops, grows, reproduces, ages, and dies.**

5. Correct order from smallest to largest: **atoms, molecules, cells, tissue, organ, organ system, organism.**

6. There are four bases: **Adenine, Thymine, Cytosine, Guanine.** Adenine matches with Thymine, and Cytosine matches with Guanine.

TGGACCGAATTGA

7. **The rats that had more attention from the mother were able to better recover from stress later in life because of a gene which had been activated.**

The rats who got fewer licks were worse at responding to stress later in their lives.